

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 85-26

NPDES NO. CA0005134

WASTE DISCHARGE REQUIREMENTS FOR:

CHEVRON USA, INC., RICHMOND REFINERY AND  
ALLIED CHEMICAL CORPORATION, RICHMOND WORKS,  
INDUSTRIAL CHEMICALS DIVISION,  
RICHMOND, CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereafter called the Board) finds that:

1. Chevron USA, Inc., Richmond Refinery submitted an NPDES Permit Application dated December 29, 1980, and amended it by letters dated May 28, 1981, October 26, 1983, and January 10, 1985 for reissuance of NPDES Permit No. CA0005134.
2. Allied Chemical Corporation, Richmond Works submitted an NPDES Permit Application dated May 1, 1981 and amended it by a letter dated July 15, 1982 also for reissuance of NPDES Permit No. CA0005134.
3. The discharge of wastewater from the facilities is currently governed by Waste Discharge Requirements, Board Order No. 80-1, adopted by the Board on January 15, 1980.
4. Chevron USA operates a petroleum refinery with a crude-run throughput of 215,000 barrels per day. This refinery has a crude-run capacity of 365,000 barrels per day. It manufactures fuels, lubricants, asphalt, and petrochemicals and is classified as an integrated refinery as defined by the U.S. Environmental Protection Agency in 40 CFR 419.50. Treated process wastewater, stormwater runoff, and other wastes as described below are discharged into Castro Creek at a point 500 yards from its confluence with Castro Cove, an embayment of San Pablo Bay, a water of the United States.
5. Allied Chemical manufactures sulfuric acid and oleum, using alkylation acid and spent sulfuric acid from the refinery as part of its raw material. Allied discharges its wastewater to the Chevron wastewater system for treatment.
6. Chevron Chemical Company, Ortho Division, Richmond Plant manufactures fertilizers, pesticides, fungicides, and herbicides and discharges treated incinerator blowdown to Castro Creek via the Chevron USA outfall. The discharge is regulated under a separate NPDES Permit, Board Order No. 85-27, and defined in greater detail in that permit as Waste 004.

7. The reports of waste discharge and recent self-monitoring reports describe the discharges as follows:
  - a. Waste 001 averages 18.5 million gallons per day (mgd) and consists mainly of refinery process wastewater which has been treated in aerated lagoons and oxidation ponds. Waste 001 may contain once-through cooling water that has become contaminated and then diverted to the wastewater treatment plant. (Sanitary wastes are discharged to the municipal wastewater collection system.) Waste 001 includes the 0.072 mgd of wastes from Allied, consisting of cooling tower blowdown, boiler blowdown, steam condensate, plant washings and stormwater. When stormwater runoff from the refinery and adjacent development is averaged into the total discharge, the annual average flow is increased to 22 mgd.
  - b. Waste 002, as described in the permit application, consists of approximately 59 mgd of once-through cooling water from Chevron USA. Recent self-monitoring reports indicate the average cooling water discharge for 1983 was 28 mgd.
  - c. Waste 003 is defined as the combined discharge of Waste 001, Waste 002, and Waste 004 (described below). The combined average flow for 1983 totaled 48 mgd when stormwater runoff is included. Waste 003 is discharged at a point at which the wastewater receives less than 10:1 initial dilution and into Castro Cove, a dead-end slough.
  - d. Waste 004 is defined as the discharge of 0.264 mgd of incinerator blowdown from Chevron Chemical Company.
  - e. Waste 005 consists of stormwater runoff from the tank farm area tributary to a sump labeled "#380" on Attachment 'A.' An average of twelve discharges of stormwater runoff occur during the rainy season each year. Each discharge averages 1.0 million gallons.
  - f. Waste 006 consists of stormwater runoff from the tank farm area tributary to a sump labeled "#381" on Attachment 'A.' An average of eleven discharges of stormwater runoff occur during rainy season each year. Each discharge averages 1.7 million gallons.
  - g. Waste 007 consists of stormwater runoff from the tank farm area tributary to a sump labeled "Horse pasture sump" on Attachment 'A.' An average of seven discharges of stormwater runoff occur during the rainy season each year. Each discharge averages 0.67 million gallons.
8. The Board adopted a revised Water Quality Control Plan, San Francisco Bay Basin (Basin Plan) on July 21, 1982, and the State Water Resources Control Board approved it on October 16, 1982. The provisions of this permit are consistent with the objectives of the Basin Plan.
9. Chevron USA self-monitoring reports and other studies indicate process wastewater (Waste 001) and cooling water (Waste 002) have recurrently and independently exhibited acute toxicity. The combined effluent (Waste 003) may therefore contain conservative toxicants which are being discharged to Castro Creek.

10. The beneficial uses of Castro Creek, Castro Cove, and San Pablo Bay are:
  - a. Water contact recreation
  - b. Non-contact water recreation
  - c. Navigation
  - d. Open commercial and sport fishing
  - e. Wildlife habitat
  - f. Estuarine habitat
  - g. Fish spawning and migration
  - h. Industrial uses
  - i. Preservation of rare and endangered species
  - j. Shellfishing
11. The Basin Plan includes the following prohibitions:

"...It shall be prohibited to discharge:

  1. Any wastewater which has particular characteristics of concern to beneficial uses at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1 or into any nontidal water, dead-end slough, similar confined waters, or any immediate tributaries thereof."
12. The Basin Plan provides that exceptions to these discharge prohibitions will be considered for discharges where:
  - a) an inordinate burden would be placed on the discharger relative to beneficial uses protected and an equivalent level of environmental protection can be achieved by alternate means, such as an alternative discharge site, a higher level of treatment, and/or improved treatment reliability; or
  - b) a discharge is approved as part of a reclamation project; or
  - c) it can be demonstrated that net environmental benefits will be derived as a result of the discharge.
13. The existing permit prohibits the discharge of Waste 001 into waters of Castro Creek or at any place where it does not receive a minimum initial dilution of at least 10:1 after December 31, 1983 unless the discharger can show justification for an exception from the Basin Plan Prohibition stated in Finding 12 above.
14. The discharger conducted an "Equivalent Protection Study" comparing environmental and ecological factors in the vicinity of the discharge with those in similar portions of San Pablo Bay. The study documented the quality of Wastes 001 and 002 in order to satisfy criterion "a" for exception to the Basin Plan prohibition by demonstrating an equivalent level of environmental protection. This study produced inconclusive results and would have left the present discharge of process wastewater unaffected in Castro Creek and Castro Cove. After recent discussions with Board staff, the discharger has agreed to submit a new proposal for exception by October 1, 1985 along with plans for achieving compliance with the prohibition.

15. The Board will consider the adequacy of the plans for compliance and the validity of the request for an exception to the prohibition after submittal by the discharger.
16. The Basin Plan also includes the following prohibition:

"...It shall be prohibited to discharge:

All conservative toxic and deleterious substances, above those levels which can be achieved by a program acceptable to the Board, to waters of the Basin."
17. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21110) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.
18. Effluent limitation and toxic effluent standards established pursuant to Sections 208(b), 301, 304, and 307 of the Federal Water Pollution Control Act and amendments thereto are applicable to the discharge.
19. Effluent limitation guidelines requiring the application of best available technology economically achievable (BAT) have been promulgated by the U.S. Environmental Protection Agency for the Integrated Subcategory of the Petroleum Refining Point Source Category 40 CFR Part 419 on October 18, 1982. Effluent limitations of this Order are based on these guidelines, the Basin Plan, State Plans and Policies, current plant performance, and best engineering judgement. The limitations are considered to be those attainable by BAT in the judgement of the Board. (EPA has not proposed BAT regulations for wastewater discharges from sulfuric acid plants such as Allied Chemical.)
20. Chevron USA, Inc. and Allied Chemical are hereafter referred to as the discharger.
21. Under 40 CFR 122.44, "Establishing Limitations, Standards, and Other Permit Conditions," NPDES permits should also include toxic pollutant limitations if the discharger uses or manufactures a toxic pollutant as an intermediate or final product or byproduct. This permit may be modified prior to the expiration date to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through a more comprehensive monitoring program included as a part of this Order.

22. This Order contains effluent limits based on recent production rates at this facility. The Board is aware that production can vary and commits to expediting reissuance of a new permit upon receipt of an application with new production data.
23. The Board has notified the discharger and interested agencies and persons of its intent to reissue waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
24. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Federal Water Pollution Control Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Effluent Limitations

1. The discharge of Waste 001 containing constituents in excess of the following limits is prohibited:

<u>Constituent</u>	<u>Units</u>	<u>30-day Average</u>	<u>Maximum Daily</u>
BOD (5-day @ 20°C)	lbs/day	4000	7540
	kg/day	1820	3400
TSS	lbs/day	3300	5180
	kg/day	1500	2350
TOC	lbs/day	8810	16600
	kg/day	4000	7540
Oil and Grease	lbs/day	1260	2360
	kg/day	571	1070
Phenolic Compounds	lbs/day	16.3	54.6
	kg/day	7.41	24.8
Ammonia as N	lbs/day	1480	3240
	kg/day	674	1470
Sulfide	lbs/day	21.8	48.4
	kg/day	9.93	22.0
Total Chromium	lbs/day	17.0	54.5
	kg/day	7.71	24.8
Hexavalent Chromium	lbs/day	1.57	3.49
	kg/day	0.71	1.59
Settleable Solids	ml/l-hr	0.1	0.2
Soluble BOD (5-day @ 20°C)	mg/l	*	*

- \* The Board will consider inclusion of limitations for Soluble BOD (defined as non-filterable) based on 18 months of performance data to be obtained as a part of the attached self-monitoring program.

2. In addition to the 30-day average and daily maximum pollutant weight allowances shown in A.1, allocations for pollutants attributable to stormwater runoff discharged as a part of Waste 001 are permitted in accordance with the following schedules:

STORMWATER RUNOFF

<u>Constituent</u>	<u>Units</u>	<u>30-Day Average</u>	<u>Maximum Daily</u>
BOD (5-day @ 20°C)	mg/l	26	48
TSS	mg/l	21	33
TCC	mg/l	57	106
Oil and Grease	mg/l	8	15
Phenolic Compounds	mg/l	0.17	0.35
Total Chromium	mg/l	0.21	0.60
Hexavalent Chromium	mg/l	0.028	0.062

The total effluent limitation for the discharge is the sum of the stormwater runoff allocation and the mass limits contained in A.1. The total effluent limitation (both maximum and average) is to be computed by the discharger on a monthly basis as shown in Part B of the Monitoring Program.

3. The discharge of Waste 002 shall not contain a TOC concentration above intake levels in excess of 5 mg/l.
4. The discharge of Waste 003 containing constituents in excess of the following limits is prohibited:

<u>Constituent</u>	<u>Units</u>	<u>30-day Average</u>	<u>Maximum Daily</u>
Oil and Grease	mg/l	10	20

5. Waste 003 shall not have a pH less than 6.5 nor greater than 8.5.
6. In representative samples of the effluent, the discharge of Waste 003 shall meet the following limit of quality:

TOXICITY:

The survival of threespine stickleback (*Gasterosteus aculeatus*) test fishes in 96 hour bioassays of the effluent shall achieve a median of 90 percent survival for three consecutive samples and a value of not less than 70 percent survival.

7. The discharge of Wastes 005, 006, and 007 containing constituents in excess of the following limits is prohibited:

<u>Constituent</u>	<u>Units</u>	<u>Maximum Daily</u>
Oil and Grease	mg/l	15
TOC	mg/l	110
pH	pH units	6.5-8.5
Visible oil	observation	none
Visible color	observation	none

B. Receiving Water Limitations

1. The discharge of wastes shall not cause the following conditions to exist in waters of the State at any place at levels that cause nuisance or adversely affect beneficial uses:
  - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
  - b. Bottom deposits or aquatic growths;
  - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
  - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
  - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of wastes shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:
  - a. Dissolved oxygen: 5.0 mg/l minimum. The median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation.
  - b. Dissolved sulfide: 0.1 mg/l maximum.
  - c. pH: The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH levels by more than 0.5 units.
  - d. Un-ionized ammonia (as N):

0.025 mg/l	Annual Median,
0.4 mg/l	Maximum at any time.
3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

#### C. Prohibitions

1. The discharge of Waste 001 at any place where it does not receive a minimum initial dilution of at least 10:1 or into Castro Creek or Castro Cove is prohibited after July 1, 1987 unless the Board has granted the discharger an exception.

#### D. Provisions

1. In the event of repeated noncompliance with Effluent Limitation A.6 - Toxicity, the discharger may be required to submit to the Board a technical report, identifying the conservative and non-conservative toxicants in the process waste effluent and the extent to which each toxicant contributes to the total toxicity.
2. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act, or amendments thereto, and shall take effect at the end of ten days from date of hearing provided the Regional Administrator, U.S. Environmental Protection Agency, has no objections.

3. This permit shall be modified or alternatively revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(c), and (d), 303, 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
  - (a) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or,
  - (b) Controls any pollutant not limited in the permit.The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.
4. The discharger shall comply with the attached self-monitoring program as adopted by the Board and as may be amended by the Board.
5. This permit may be modified prior to the expiration date to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through a more comprehensive monitoring program included as a part of this Order.
6. All applications, reports, or information submitted to the Board shall be signed and certified pursuant to Environmental Protection Agency regulations 40CFR122.41(k).
7. Pursuant to Environmental Protection Agency regulations [40CFR122.42(a)] the discharger must notify the Board as soon as it knows or has reason to believe (1) that they have begun or expect to begin, use or manufacture a pollutant not reported in the permit application, or (2) a discharge of a toxic pollutant not limited by this permit has occurred, or will occur, in concentrations that exceed the specified limits included in 40CFR122.42(a).
8. Order Nos. 80-1 and 80-45 are hereby rescinded.
9. This Order includes all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977 except A.5, A.12, B.2, and B.5.
10. This Order expires on July 1, 1987 and the discharger must file a Report of Waste Discharge in accordance with Title 23, California Administrative Code, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.

11. The discharger shall comply with all Specifications and Provisions of this Order immediately upon adoption, except as noted in Prohibition C.1. The discharger shall comply with Prohibition C.1 in accordance with the following time schedule:

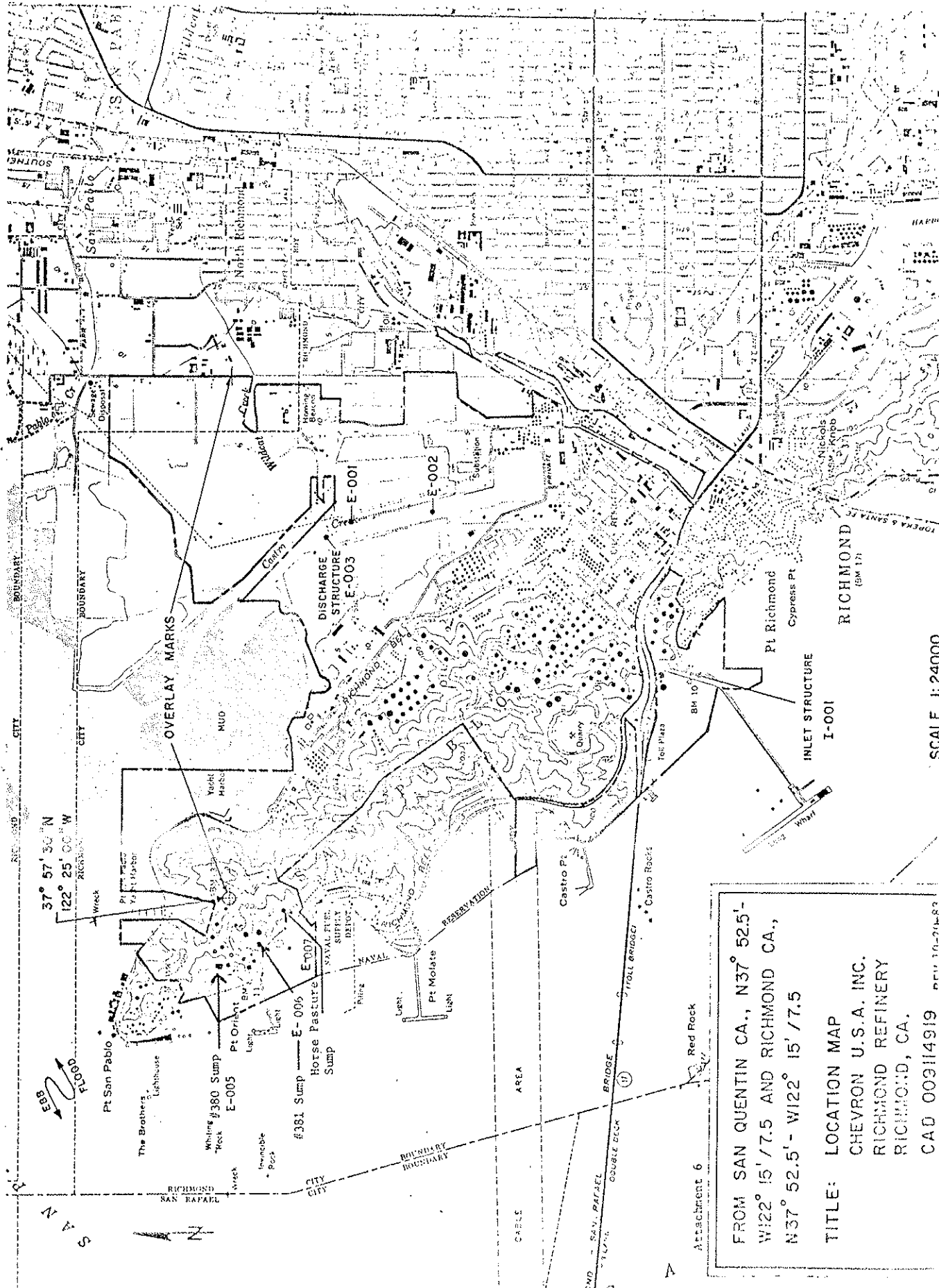
<u>Task</u>	<u>Deadline</u>
Submit a progress report on compliance with Prohibition C.1 and exception request:	June 15, 1985
Submit plans and interim time schedule for compliance with Prohibition C.1 and, if appropriate, a request for consideration of an exception to the prohibition:	October 1, 1985
Achieve full compliance with Prohibition C.1:	July 1, 1987

I, Roger B. James, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on February 20, 1985.

ROGER B. JAMES  
Executive Officer

Attachments:

Location Map  
Standard Provisions, Reporting  
Requirements and Definitions dated April 1977  
Self-Monitoring Program



FROM SAN QUENTIN CA., N37° 52.5'-  
W122° 15' 7.5 AND RICHMOND CA.,  
N37° 52.5' W122° 15' 7.5

TITLE: LOCATION MAP  
CHEVRON U.S.A. INC.  
RICHMOND REFINERY  
RICHMOND, CA.  
CAD 003114919 REV 10-74-82

SCALE 1:24000

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

AMENDED  
SELF-MONITORING PROGRAM  
FOR

CHEVRON, USA, INC.

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NPDES NO. CA 0005134

ORDER NO 85-26

CONSISTS OF

PART A dated Januaryy 1978

AND

PART B

## PART B

### I. DESCRIPTION OF SAMPLING STATIONS

#### A. INFLUENT

<u>Station</u>	<u>Description</u>
I-001	At any point in the intake line supplying once-through cooling water such that the sample is representative of the intake water.

#### B. EFFLUENT

<u>Station</u>	<u>Description</u>
E-001 Process Water Effluent	At any point in the discharge line from No. 2 Oxidation Pond such that the sample is representative of the treated process water.
E-002 Segregated Cooling Water	At any point in the 250-foot Channel far enough upstream to avoid mixing segregated cooling water with process water effluent.
E-003 Combined Effluent	At any point immediately above the 250-foot Channel Dam such that the sample is representative of the mixture of segregated cooling and treated process water.
E-005	At any point in the discharge line from sump #380 such that the sample is representative of the stormwater runoff.
E-006	At any point in the discharge line from sump #381 such that the sample is representative of the stormwater runoff.
E-007	At any point in the discharge line from the "horse pasture sump" such that the sample is representative of the stormwater runoff.

#### C. RECEIVING WATERS

<u>Station</u>	<u>Description</u>
C-A1	At a point in Castro Creek located at the confluence with the 250-foot channel.
C-A2	At a point in Castro Creek located 250 feet south-easterly of Station C-A1.
C-12d	At the mouth of an unnamed slough which drains the marsh east of Castro Creek. The mouth is about 1800 feet northwest of the discharge point.

<u>Station</u>	<u>Description</u>
C-20d	At a point in San Pablo Bay located in the entrance channel to Castro Creek, within the limits of the southwesterly quarter of grid square no. 20 (per attached drawing).
C-28d	At a point in San Pablo Bay located in the entrance channel to Castro Creek, within the limits of the southwesterly quarter of grid square no. 28 (per attached drawing).

D. SEDIMENTS

<u>Station</u>	<u>Description</u>
B-A1	At a point in Castro Creek, located at the confluence with the 250-foot channel.
B-28d	At a point in San Pablo Bay, located in the entrance channel to Castro Creek, within the limits of the southwesterly quarter of grid square no. 28, per attached drawing (corresponds with Station C-28d.)
B-39b	At a point in San Pablo Bay, located within the limits of the northeasterly quarter of grid square no. 39, per attached drawing (corresponds with Station C-39b.)
B-48d	At a point in San Pablo Bay, located within the limits of the southwesterly quarter of grid square no. 48, per attached drawing (corresponds with Station C-48d).

## II. MISCELLANEOUS REPORTING

- A. The discharger shall record the rainfall on each day of the month.
- B. The discharger shall determine the stormwater runoff/ ballast water allocation (daily & monthly) for its discharge using the method described in attached Form A. Form A shall be submitted with the monthly self-monitoring report. The daily maximum allocation must be computed for each day Waste 001 is monitored.
- C. The discharger shall retain and submit (when required) the following information concerning the monitoring program for organic and metallic pollutants.
  - a. Description of sample stations, times, and procedures.
  - b. Description of sample containers, storage, and holding time prior to analysis.
  - c. Quality assurance procedures together with any test results for replicate samples, sample blanks, and any quality assurance tests, and the recovery percentages for the internal and surrogate standards.
- D. The discharger shall submit in the monthly self-monitoring report the metallic & organic test results together with the detection limits (including unidentified peaks). All unidentified (non-Priority Pollutants) peaks detected in the EPA 624 and 625 test methods shall be identified and semi-quantified. Hydrocarbons detected at  $\leq 10$  ug/l based on the nearest internal standard may be appropriately grouped and identified together as aliphatic hydrocarbons, aromatic hydrocarbons, and unsaturated hydrocarbons. All other hydrocarbons detected at  $>10$  ug/l based on the nearest internal standard shall be identified and semi-quantified.

Note that you may submit your metallic monitoring results in your regular self-monitoring reports or in a separate report within thirty days of the end of each month, as long as you indicate in your regular monthly monitoring report that the metals results will be reported in this separate report.

- E. Ballast water treated and discharged as part of Waste 001 shall be metered and the volume recorded in attached Form A for each calendar day. The 30-day

average shall be the sum of the daily values in a calendar month divided by the number of days in that month. Ballast-water allocations shall be calculated by multiplying the volume of ballast water, determined above by the appropriate concentration listed under Effluent Limitation A.2. in the permit.

- F. The ratio of Waste 002 to Waste 001 shall be reported as a daily and a monthly value.

### III. SCHEDULE OF SAMPLING AND ANALYSIS

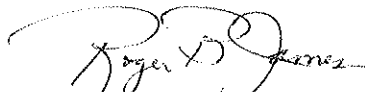
- A. The schedule of sampling and analysis shall be that given in Table 1 (attached).
- B. Sample collection, storage, and analyses shall be performed according to the latest 40 CFR Part 136 or other methods approved and specified by the Executive Officer of this Regional Board.

### IV. MODIFICATIONS TO PART A

Exclude paragraph E.4.

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No.73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No.85-26.
2. Is effective on the date shown below.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.



ROGER B. JAMES  
EXECUTIVE OFFICER

Attachments:  
Table 1  
Form A  
Figure 1

Effective Date FEBRUARY 2, 1987

TABLE 1  
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

[illegible]



LEGEND FOR TABLE 1

TYPES OF SAMPLES

G = grab sample  
C-24 = composite sample - 24-hour  
Cont = continuous sampling  
O = observation

TYPES OF STATIONS

I = intake stations  
E = waste effluent stations  
C = receiving water stations  
B = bottom sediment stations

FREQUENCY OF SAMPLING

E = each occurrence	M = once each month
D = once each day	2M = every 2 months
W = once each week	Y = once each year
2/W = 2 days per week	2Y = twice each year
	cont = continuous

FOOTNOTES FOR TABLE 1

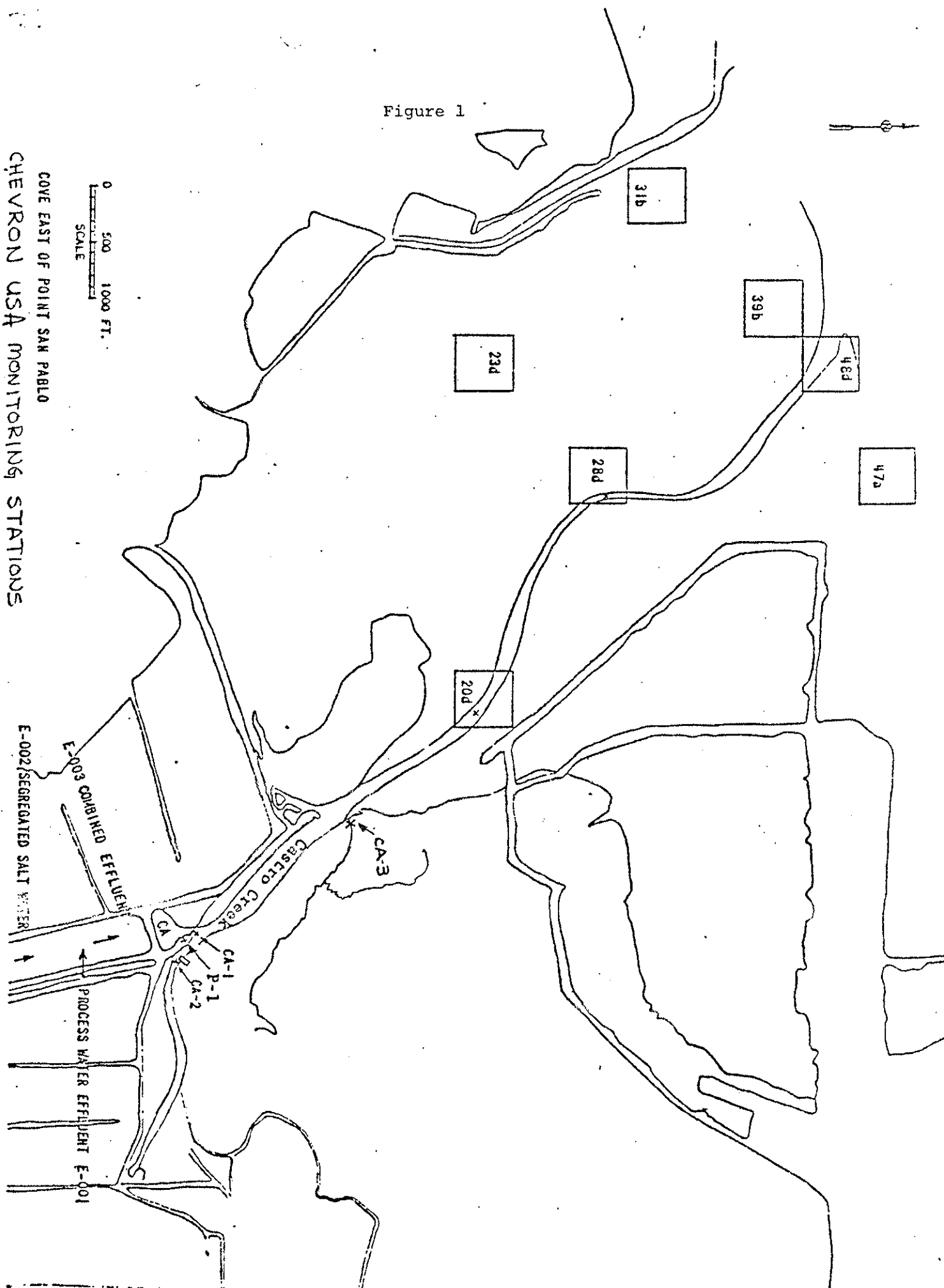
- (1) Oil and grease sampling shall consist of 3 grab samples taken at 2 hour intervals during the sampling day, with each grab being collected in a glass container. The entire volume of each sample shall be composited prior to analysis. Each glass container used for sample collection or mixing shall be thoroughly rinsed with solvent rinsings as soon as possible after use, and the solvent rinsings shall be added to the composite wastewater sample for extraction and analysis.
- (2) Daily minimum and maximum shall be reported.
- (3) The percent survival shall be determined using a 96-hour static bioassay.
- (4) Receiving water analysis for sulfides should be run when dissolved oxygen is less than 5.0 mg/l.
- (5) Volatile Organic Toxic Pollutants shall be analyzed using EPA Method 624 of the July, 1982, Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, EPA-600/4-82-057.
- (6) Acid and Base/Neutral Extractable Organic Toxic Pollutants shall be analyzed using EPA Method 625 of the July, 1982, Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, EPA-600/4-82-057.

- (7) Grab samples shall be collected coincident with samples collected for the analysis of the regulated parameters. In addition, the grab samples must be collected in glass containers.
- (8) Polynuclear Aromatic Hydrocarbons shall be analyzed using EPA Method 610 of the July, 1982, Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater. Note that the samples must be collected in amber glass containers. These samples shall be collected coincident with samples collected for the analysis of the regulated parameters. An automatic sampler which incorporates glass sample containers and keeps the samples refrigerated at 4 C and protected from light during compositing may be used. Note that the 24-hour composite samples may consist of eight grab samples collected at three-hour intervals. The analytical laboratory shall remove flow-proportioned volumes from each sample vial or container for the analysis.
- (9 ) Soluble BOD is defined here as the 5-day, 20°C BOD of filtrate that passes through a standard glass fiber filter as described in Standard Methods for the Examination of Water and Wastewater, 15th Edition, Part 209 B., APHA, AWWA, WPCF, (1980).
- (10) The percent survival shall be determined in a 96-hour flow-through bioassay.
- (11) Selenium must be analyzed only by the atomic absorption, gaseous hydride procedure (EPA Method No. 270.3/Standard Method No. 303E).

Figure 1

CHEVRON USA MONITORING STATIONS  
COVE EAST OF POINT SAN PABLO

0 500 1000 FT.  
SCALE



STORMWATER/BALLAST WATER ALLOCATION PROCEDURE

This procedure uses a bankbook to inventory stormwater. Any stormwater in excess of the estimated processed stormwater is inventoried. Stormwater allocations are calculated using the actual processed stormwater developed in the attached table.

Definitions:

Dry Weather Season - The months of June to September exclusive of a one-week period following any rainstorm.

Estimated Dry Weather Process Wastewater Flow - The average effluent flowrate during the previous dry weather season.

Stormwater Runoff - The product of the inches of rainfall and the runoff factor.

Estimated Processed Stormwater - The difference between the actual effluent flowrate and the ballast water plus dry weather flowrate.

Stormwater Bankbook - Calculated inventoried stormwater.

Actual Process Stormwater - If the stormwater bankbook is not zero, the actual processed stormwater equals the estimated flow. If the bankbook is zero, the actual processed stormwater is equal to the stormwater runoff for that day plus the bankbook for the previous day.

# STORMWATER/BALLAST WATER ALLOCATION PROCEDURE

(A) Rainfall (in.)	(B) Stormwater Runoff (MGal/D)	(C) Effluent Flow (MGal/D)	(D) Dry Weather Effluent Flow (MGal/D)	(E) Estimated Processed Stormwater (MGal/D)	(F) Stormwater Bankbook (MGal)	(G) Actual Processed Stormwater (MGal/D)	(H) Ballast Water (MGal/D)
1							
2							
3							
.							
.							
.							
30							
TOTAL							
AVERAGE							
MAXIMUM							

Previous Month's Bankbook=

Column (B) = Column (A) X Runoff Factor

Column (E) = Column (C) - Column (D) - Column (H).

Column (F): Column (F) = Column (F)(Previous Day) + Column (B) - Column (E).  
Column (F) = 0 if Column (F) < 0.

Column (G): If Column (F) > 0, then Column (G) = Column (E).  
If Column (F) = 0, then Column (G) = Column (B) + Column (F) previous day.

MAXIMUM DAILY LIMITS						
DATE	BOD (KG/D)	TSS (KG/D)	04G (KG/D)	PHENOL (KG/D)	TOTAL CHROME (KG/D)	HEX. CHROME (KG/D)

Maximum Daily Limit = Effluent Limit A.1. + Stormwater Allocation  
(Daily Max in kg/day) (Daily Max)

Stormwater Allocation = Effluent Limit A.2. x Daily Processed Stormwater x 3.785 l/gal  
(Daily Max in mg/l) (in mgd)

Date	Rainfall (Inches)	Storm Runoff Flow (Inches x Runoff Factor) Gallons	Ballast Flow in gallons
1-2			
2-3			
3-4			
4-5			
5-6			
6-7			
7-8			
8-9			
9-10			
10-11			
11-12			
12-13			
13-14			
14-15			
15-16			
16-17			
17-18			
18-19			
19-20			
20-21			
21-22			
22-23			
23-24			
24-25			
25-26			
26-27			
27-28			
28-29			
29-30			
30-31			
31-1			
Total			
Monthly Average			

MONTH:			
YEAR:			
30-Day Average	BOD <sub>5</sub>	Monthly Average	A.1. Total Effluent
		Storm Runoff/Ballast Water Flow Factor (expressed in thousand Gals./Day x (kg / 1000 Gals.) = (kg / day)	+ Effluent Limits = Limit (kg / day)
		x 0.098 =	+
Limita- tion	TSS	x 0.079 =	+
( Kg / day)	TOC	0.22	
	COD	x 0.68 =	+
	OSG	x 0.03 =	+
	PHENOL	x 0.00064 =	+
	TOTAL CHROME	x 0.00079 =	+
	HEX CHROME	x 0.00011 =	+